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ABSTRACT

Although depression is considered to be common in the elderly, reliable rates of prevalence are lacking. Studies have shown that age differences on measures of depressive symptomatology can be attributed to higher levels of somatic complaints. In order to examine whether the association between somatic and depressive symptoms varies as a function of health status in an older population, a sample of adults aged 50 to 87 (N=111) were surveyed using a self-report health rating, and the Brief Symptom Inventory (BSI) to assess psychiatric symptomatology. Factor anaylsis of the BSI yielded high loadings for each of the somatic and depressive symptoms, indicating the independence of the two constructs and providing evidence for the validity of the BSI. Data analysis showed that respondents endorsed more somatic complaints than depressive complaints. Of the eight symptoms endorsed most often, six were somatic items. These findings indicate that rates of prevalence for depression in the elderly may be overestimated when measures of depressive symptomatology that include somatic complaints are used. Descriptive statistics for the BSI comparing an elderly sample with normal young, normal adolescent, and psychiatric outpatient samples, along with data analyses, are appended. (LLL)

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Depression, Health, and Somatic Complaints in Older Adults

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Paper presented at American Psychological Association, Anaheim, CA, August, 1983.

The data presented in this paper were collected as part of a geriatric health needs assessment survey. The authors would like to thank John Meyer of St. Vincent Medical Center, Connie Dessonville, Curt Hileman, Julie Patterson, Judy Zarit, Cynthia Pearson, Kathy Marshall, Penny Hand, Monica Basco, and the many others who assisted in data collection and analysis. Finally, we especially thank Norman Cliff for his consultation concerning methods of analysis.

INTRODUCTION

Depression is considered to be common in the elderly, however, reliable rates of prevalence are lacking. Based on findings from 3 sources of data: psychiatric case registers, surveys of institutional and clinical populations and general population surveys, the prevalence rates for depression range from 2% to 65% (Gurland, 1976). Investigations of these discrepancies revealed that the number of elderly suffering from depressive symptomatology was much greater than those with an actual "case" of depressive illness (Gurland, 1976; Raskin, 1979; Blazer, 1983). In community studies alone, rates of depressive disorders based on psychiatric interviews were consistently lower than rates that used symptom checklists to identify depressed persons.

Studies have shown that age differences on measures of depressive symptomatology can be attributed to higher levels of somatic complaints (Zung, 1967; Blumenthal, 1975; Zemore & Eames, 1979; Berry & Storandt, 1983). Kay and Bergmann (1980) point out that when scales include multidimensional symptomatology, it becomes difficult to separate psychological symptoms from those with a physical basis. Siegler and Costa (in press) indicate that this difficulty increases with age. Therefore, several researchers suggest that the higher levels of somatic complaints reflect the increased incidence of physical illness in the elderly rather than depression (Blazer, 1983).

The purpose of this study was to test this hypothesis by examining whether the association between somatic and depressive symptoms varied as a function of health status in an older population.

METHODS

Subjects. The sample consisted of 111 community dwelling elderly persons. They were selected by using a multistage probability-proportionate-to-size cluster sampling frame to identify a representative sample of adults aged 50 and older to interview as part of a geriatric health needs assessment survey conducted in a central city area of Los Angeles. Persons ranged in age from 50 to 87 with a mean age of 65.1 years. Ethnic balance was as follows: 52% white, 32% Hispanics, 8% black and 8% Asian, with 34.9% reporting that their primary language was not English. The average educational level was 10 years. Economic status was predominantly at the poverty level, over 68% of the respondents reporting incomes of less than $7000 per year. Women and men were comparable on age, educational level and income but women slightly outnumbered men by 1.4:1.

Procedures. Health was assessed with a self-report rating of "excellent", "good", "fair", or "poor" and a medical illness checklist. Although these measures cannot be considered substitutes for clinical examinations, they represented economical global assessments which other investigators have found to compare favorably with physician's ratings (LaRue, Bank, Jarvik, & Hetland, 1979) and with other objective measures for assessing the health of community elderly (Fillenbaum, 1979). The Brief Symptom Inventory (BSI) was used to assess psychiatric symptomatology (Derogatis & Spencer, 1982). The BSI provides separate subscales for somatic and depressive complaints and is the most recent version of the Hopkins Symptom Checklist which has been recommended by Waskow and Parloff (1975) for measuring individual distress in adults. However, little is known about the use of this scale with an older population (see Pearson & Gatz, 1982, for scale means and reliabilities for this sample).

RESULTS

Descriptive statistics for the BSI were consistent with previous studies with other scales. Respondents endorsed more somatic complaints (68% endorsed at least one symptom) than depressive complaints (55% endorsed at least one symptom). Furthermore, of the 8 symptoms endorsed most often, 6 were somatic items (see Table 1). The construct validity of the BSI was tested by performing a factor analysis on the somatic symptoms and the symptoms of depression. In addition to being a preliminary first step to testing our hypothesis, the result of this analysis was interesting in and of itself for the following reason. If the increase of somatic symptoms in the elderly represents a different type of depression, factor analyzing the symptoms from both dimensions should reveal considerable interdependence and a failure to validate the construct validity of the two scales. If, however, the symptoms represent two separate constructs (as has been shown in non-aged samples), the results would indicate that somatic symptoms are representing something other than depression.

Results of the factor analysis yielded high factor loadings for the cluster of items defining each construct. Figure 1 illustrates a factor plot of the symptoms. Somatic symptoms showed high loadings on the somatization factor and depressive symptoms showed high loadings on the depression factor. These results confirmed the independence of somatic and depressive symptoms for older adults and provided evidence for the validity of these BSI subscales.

The distribution of scores for the somatic and depression dimensions were highly skewed, with 29% failing to endorse any items. We reconciled the problem by constructing 2 x 2 contingency tables reflecting the frequency of persons endorsing or not endorsing somatic or depressive

complaints. By performing Chi-square analyses on this data, we were able to test the relationship between the endorsement of somatic complaints and the endorsement of depressive complaints.

In order to examine the influence of health, we divided our sample into two groups according to their self-rated health scores. The mean of the 4 point scale was 2.33 with a higher rating indicating poorer health. These results are consistent with other findings in the literature (Shanas & Maddox 1968; Tissue, 1972). For the purposes of analysis, persons who rated their health as excellent or good were considered in good health and persons who rated their health as fair or poor were considered in poor health. Fifty-nine percent of the sample fell into the good health group and 41% into the poor health group.

Three separate chi-square analyses were performed: the total sample, the groups in good health, and the group in poor health. The results are illustrated in Figures 2 and 3. A significant relationship between the endorsement of somatic and depressive complaints was found for the total sample. However, looking at the total sample obscured an important difference. When the sample was divided into two groups according to self-rated health, a significant association between depression and somatization was found for the healthy group but not for the unhealthy group. For the group in poor health, somatic complaints appeared to reflect physical health problems, not depression.

DISCUSSION

The results of the factor analysis indicate that the BSI is a valid scale to use with older adults when assessing somatic and depressive symptomatology. By separating out the items that define each construct, a more precise evaluation of the contribution of each dimension can be made. This is especially important when conducting research with older adults since the distinction between symptoms may be less obvious with age (Siegler & Costa, in press).

The results of the chi-square analyses confirmed the influence of health status on the endorsement of somatic symptoms. A significant association between somatic and depressive complaints was found for persons with good health but not for persons with poor health. For the latter group, the lack of association seemed to be due to their greater endorsement of somatic complaints.

These findings support previous explanations for the increase in the reporting of somatic complaints with age, namely, the greater decline in health of older persons. They also indicate that rates of prevalence for depression in the elderly may be overestimated when measures of depressive symptomatology are used that include somatic complaints. Therefore, it is important when using measurements in assessing the elderly to consider the role of health and its influence on patterns of complaints.

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TABLE 1

Descriptive Statistics for Brief Symptom Inventory comparing an elderly sample with norms from Derogatis (1982) for Normal Young, Normal Adolescents, and Psychiatric Outpatient samples

	(Mahurin & Gatz) Older Adults (n=111)	(Derogatis,1982) Normal Young (n=719)	(Derogatis,1982) Normal Adolescents (n=2408)	(Derogatis,1982) Psychiatric Outpatients (n=1002)
BSI SYMPTOMS RANKED BY PERCENTAGE SYMPTOMATIC				
#	%	%	%	%
16: Feeling lonely (d)	47	25	47	82
37: Feeling weak in parts of body (s)	43	22	42	54
17: Feeling blue (d)	39	33	46	88
29: Trouble getting your breath (s)	33	14	19	33
7: Pains in heart or chest (s)	31	16	43	38
23: Nausea or upset stomach (s)	31	23	39	51
33: Numbness or tingling in body (s)	30	24	31	38
2: Faintness or dizziness (s)	28	17	43	42
18: Feeling no interest in things (d)	22	19	38	69
30: Hot or cold spells (s)	22	18	23	40
35: Feeling hopeless about the future (d)	20	18	32	78
50: Feelings of worthlessness (d)	19	11	29	71
9: Thoughts of ending your life (d)	10	3	20	46
Somatization (s)	.48	.29	.63	.83
Depression (d)	.45	.28	.82	1.80
Global Severity Index (GSI)	.41	.30	.83	1.32
Number of Symptoms Endorsed (PST)	13.05	11.45	24.81	30.80

FIGURE 1
PLOT OF REFERENCE STRUCTURE FOR FACTOR 1 AND FACTOR 2

SOMATIC ITEMS		DEPRESSIVE ITEMS
BSI 23	BSI 2	BSI 17
BSI 33	BSI 7 & BSI 37	BSI 35
BSI 29	BSI 30	BSI 18
		BSI 50
		BSI 16
		BSI 9

FIGURE 2

Frequency data on persons reporting different complaint patterns.

ALL SUBJECTS

Depression	Somatic Complaints: no	Somatic Complaints: yes	
no	32	22	54
yes	9	48	57
	41	70	111=N

Chi-Square = 22.50 **

* $p < .05$

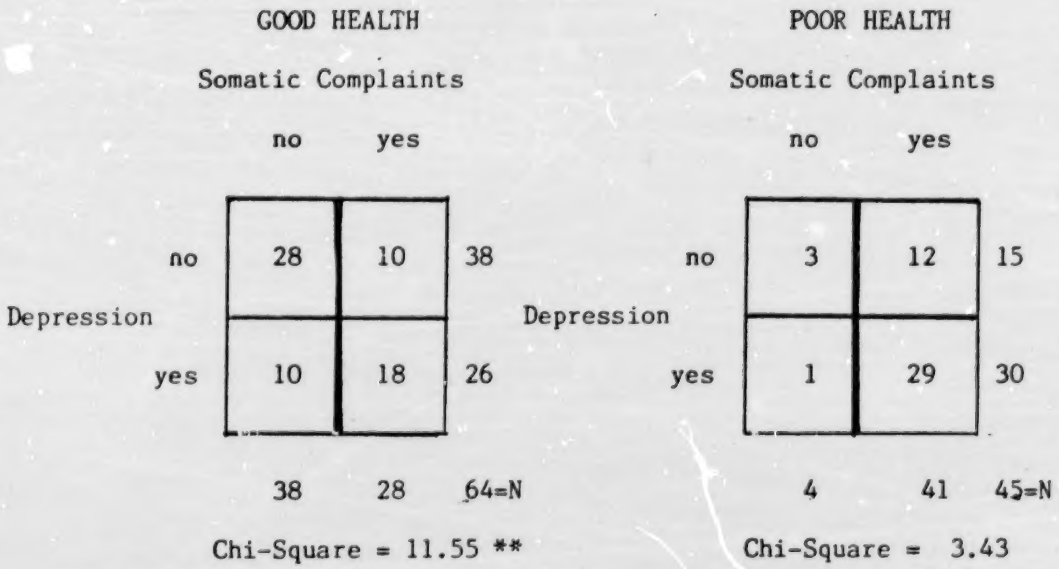
** $p < .01$

Note: no = endorsed no complaints

yes = endorsed one or more complaints

FIGURE 3

The influence of health on the reporting of different complaint patterns.



* $p < .05$

** $p < .01$